

REMARKS

SUMMARY OF THE AMENDMENTS

The present application contains twenty-seven (27) claims, numbered 1, 4-6, 11-13, 16-18, 21, 22, 27-29, 32, 33, 37, 40-42, 47-49, 52, 53 and 57.

Claim(s) 2, 3, 7, 8, 9, 10, 14, 15, 19, 20, 23, 24, 25, 26, 30, 31, 34, 35, 36, 38, 39, 43, 44, 45, 46, 50, 51, 54, 55, 56 and 48 have been cancelled.

Claims 1, 18, 37 and 57 have been amended to incorporate therein the feature of former claim 3.

Claims 4, 5, 21, 22, 33, 40 and 41 have been amended for consistency with the amendment to claims 1, 18 and 37.

Claims 13, 29, 48, 49 have been amended to correct typographical errors.

It is believed that no new matter has been added under the present amendment.

CLAIM REJECTION(S) UNDER 35 USC 112

On page 2 of the Office Action, claims 1-17, 34-35 and 57 were rejected under 35 USC 112, second paragraph, as being indefinite. In response, claims 2, 3, 7, 8, 9, 10, 14, 15, 34 and 35 have been cancelled, rendering the Examiner's rejection moot in respect of these claims. As for claims 1, 4, 5, 6, 11, 12, 13, 16, 17 and 57, it is noted that claims 1 and 57 have been amended to replace "default route generator" with "default router". It is respectfully submitted that claims 1, 4, 5, 6, 11, 12, 13, 16, 17 and 57 meet the requirements of 35 USC 112 and the Examiner is respectfully requested to withdraw the rejection of claims 1, 4, 5, 6, 11, 12, 13, 16, 17 and 57.

CLAIM REJECTION(S) UNDER 35 USC 103

On page 3 of the Office Action, claims 1-58 were rejected under 35 U.S.C. 103(a) as being unpatentable over Liston (U.S. Patent Publication No. 2004/0103314).

Claims 2, 3, 7, 8, 9, 10, 14, 15, 19, 20, 23, 24, 25, 26, 30, 31, 34, 35, 36, 38, 39, 43, 44, 45, 46, 50, 51, 54, 55, 56 and 48 have been cancelled, rendering the Examiner's rejection moot. As regards claims 1, 4-6, 11-13, 16-18, 21, 22, 27-29, 32, 33, 37, 40-42, 47-49, 52, 53 and 57, Applicant notes that each of these claims incorporates the feature of former claim 3, thus the following discussion will focus on former claim 3 and current claim 1.

In the Office Action, the Examiner merely states "[p]er claims 2-4, 7-8 and 9-10, Liston's invention is used to prevent common network attacks including virus, worms, etc.". Yet, former claim 3 related to "determining a misconfiguration of a network routing table in a second network adjacent to said network", which differs significantly from the subject matter seemingly examined by the Examiner. Thus, with respect, the Examiner's approach is contrary to the basic tenet that "in a rejection based on 35 U.S.C. 103, the reference teachings must somehow be modified in order to meet the claims" (see MPEP §706.02 V), since the Examiner has not shown how the limitations of former claim 3 are "met" by the Liston or any modification thereto.

Furthermore, the Examiner has not actually provided any reasoning as to why claim 3 would actually be obvious in light of the prior art. As such, it is respectfully submitted that the Examiner's rejection is not viable under *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985), where it was stated that "[t]o support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references" (MPEP §706.02(j)).

Moreover, the Examiner has not established any framework for the objective analysis for determining obviousness under 35 USC 103, as "reiterated by the Supreme Court in KSR [...

and ...] stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966)” (MPEP §2141).

The Examiner is respectfully reminded that the MPEP explicitly mentions that “It is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply” (MPEP §706.02(j)). With respect, it would appear that the Examiner’s basis for the rejection of former claim 3 (which would now be directed at amended claim 1 instead of former claim 3) has not been “properly communicate[d]”.

Applicant therefore respectfully requests reconsideration on the above grounds. As such, if the Examiner maintains the rejection of former claim 3 (which would now be directed at amended claim 1 instead of former claim 3), then the Examiner is respectfully requested to provide proper support for such rejection.

Notwithstanding the above, Applicant nevertheless traverses the rejection, and submits that the aforementioned claims distinguish clearly and patentably over Liston, as set forth herein below.

Claim 1

Claim 1 is reproduced below for the Examiner’s convenience:

1. A system for analyzing network traffic comprising:
 - a plurality of subscriber units and a default router interconnected by a first network, said first network operable to direct routed traffic to an appropriate subscriber unit and further operable to direct unrouted traffic to said default router; and
 - an analyzer connected to said default router for determining a misconfiguration of a network routing table in a second network adjacent to said first network based on patterns of activity within said unrouted traffic.

It is respectfully submitted that Liston does not teach or suggest “determining a misconfiguration of a network routing table in a second network adjacent to said first network based on patterns of activity within said unrouted traffic”.

More specifically, Liston discloses a system and method for network intrusion prevention (see Title). Specifically, “an inbound data packet 10 created by an external network IP address or a local IP address attempts to communicate with a local IP address within the computer network. The border router or local computer generates an ARP packet 20 to find the IP address that the packet targets” (par. [0036]). Then, “[i]f a computer at the target IP address does not respond to the ARP packet, the method and system of the claimed invention sends a forged ARP response 60, which creates the appearance that a real machine is associated with the previously unused IP address” (par. [0037]). Of note is the fact that “[I]f the source IP address [of a subsequent IP packet] is not on the bad guy list and the target IP address is virtually occupied by the method and system, the source IP address is added to the bad guy list 160 if the source IP address is not listed on an override table 170” (par. [0040]).

Liston proposes various countermeasures “to prevent unauthorized users from connecting to IP addresses associated with real computers or to slow or capture an unauthorized users’ automated scan of a computer network containing unused IP addresses” (par. [0042]). Subsequently, “[t]he bad guy lists from each of the LaBrea TM system 4 are then aggregated 240 to form a global bad guy list 250 to be transmitted 260 back to each individual LaBrea TM system 4 via the Internet” (par. [0045]).

From these and other passages in Liston, it is clear that Liston merely creates “bad guy lists”, and does not carry out any analysis on “patterns of activity within [...] unrouted traffic”. Without any such analysis, Liston is naturally precluded from determining whether or not there has been a misconfiguration of a network routing table in a second network.

In contrast, the claimed invention comprises an analyzer that is connected to a default router (to which unrouted traffic is directed by a first network) and which determines a misconfiguration of a network routing table in a second network adjacent to the first network based on patterns of activity within the unrouted traffic. Understanding of this feature may be assisted by reformulating the example from paragraphs [0057] to [0062] of the present

application. (Naturally, this example is only for illustrative purposes and is not to be interpreted as limiting the invention as defined by the claim language. Applicant is merely providing an illustration, not reading limitations into the claims.) In particular, let unrouted packets in a first network be captured by the default router and logged by the analyzer. Now suppose that analysis of the patterns of activity of the unrouted traffic reveals that some of the unrouted traffic captured by the default router is associated with certain source IP addresses that belong to devices in a second (adjacent) network that is operated by a different service provider. A misconfiguration of the routing table in the second network is thus determined, such misconfiguration having caused unrouted traffic to enter the first network when in fact it ought not to have.

It is noted that the capability of determining a network routing table misconfiguration does not exist anywhere in Liston. Rather, Liston is merely concerned with identifying “bad guys” in the equivalent of the claimed “first network”. Specifically, in Liston, the source IP address associated with an unused target IP address will find itself on the bad guy list in a more or less automatic fashion, without any analysis of “patterns of activity within the unrouted traffic” having been performed. Moreover, no such analysis is conducted in Liston to determine anything even remotely resembling a “misconfiguration of a network routing table in a second network adjacent to the first network”.

Thus, not only is it clear that Liston fails to disclose all the elements of claim 1, but it should also be apparent that the differences between the claimed invention and the cited art are beyond the level of ordinary skill in the art. The Examiner is therefore respectfully requested to withdraw the rejection of claim 1.

Claims 18, 37 and 57

These claims include language similar to that of claim 1 and therefore it is respectfully submitted that claims 18, 37 and 57 distinguish clearly and patentably over Liston for the same reasons as those set forth above in respect of claim 1. The Examiner is therefore respectfully requested to withdraw the rejection of claims 18, 37 and 57.

Claims 4-6, 11-13, 16, 17, 21, 22, 27-29, 32, 33, 40-42, 47-49, 52 and 53

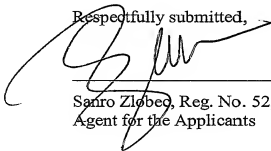
It is noted that each of claims 4-6, 11-13, 16, 17, 21, 22, 27-29, 32, 33, 40-42, 47-49, 52 and 53 depends from one of claims 1, 18 and 37 and, as such, incorporates by reference all the features contained therein, including those that confer patentability to the respective base claim over Liston. The Examiner is therefore respectfully requested to withdraw the rejection of claims 4-6, 11-13, 16, 17, 21, 22, 27-29, 32, 33, 40-42, 47-49, 52 and 53.

CONCLUSION

In view of the foregoing, Applicant is of the view that claims 1, 4-6, 11-13, 16-18, 21, 22, 27-29, 32, 33, 37, 40-42, 47-49, 52, 53 and 57 are in allowable form. Favourable reconsideration and withdrawal of all rejections is respectfully requested. Early allowance of the Application is earnestly solicited.

If the application is not considered to be in full condition for allowance, for any reason, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner for placing the application in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,



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